

1                   TITLE OF INVENTION

2                   Recessed Step

3                   CROSS REFERENCES TO RELATED APPLICATIONS

4                   Not Applicable

5                   STATEMENT REGARDING FEDERALLY SPONSORED RESEARCH

6                   Not Applicable

7                   REFERENCE TO APPENDIX

8                   Not Applicable

9                   BACKGROUND OF THE INVENTION

10                  FIELD OF THE INVENTION:

11                  This is a device, which will allow the user to "add" a step  
12                  in needed situations such as hard to reach places in the  
13                  kitchen, or closets. The step is portable and easily stowed  
14                  when not in use.

15                  PRIOR ART:

16                  The prior art in this area reveals that there are a variety  
17                  of means to add a step in certain applications. These can be  
18                  attached to cabinets such as Caminiti, patent number 5,131,492  
19                  or drawers as in Gaede, patent number 3,481,429. Additionally,  
20                  there are fold away steps, Horvath, patent number 3,136,386.

21                  While these are indeed similar ideas, they are permanently  
22                  attached or affixed to an object.

23                  This device is a portable additional step, which can be  
24                  moved from location to location and provides the user with  
25                  greater flexibility in terms of ease of access and utility.

1                   **BRIEF SUMMARY OF THE INVENTION**

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3       One of the difficulties in the home or business is reaching  
4       overhead areas. People stand on chairs, footstools and the like  
5       to reach these difficult areas.  
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9       This device combines the utility of a step with  
10      portability so that the device will not clutter up  
11      the home or be a traffic hazard in a kitchen or garage.  
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14      The device will provide another step, which will raise to a  
15      level of approximately six to eight inches above the level of  
16      the rest of the device. The additional step is raised by use of  
17      a hinge mechanism, which has been placed on the outside edges of  
18      the step. This is not a step stool because it can be stored  
19      under a cabinet or in its own storage place and hidden from  
20      view.  
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23      It is a portable unit that allows the user to  
24      have within his or her grasp a device, which will add an  
25      additional step wherever one may be needed. The device is in  
26      the shape of a hollow, rectangular box. In the approximate  
27      middle of the device is a piece of wood with a hole in the  
28      middle. This piece of wood rotates up and down and provides the  
29      additional step.  
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32      The hole in the center of the piece allows the owner to  
33      carry the device from location to location with relative ease.  
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35      The step - when in the down position - will remain flush with  
36      the rest of the unit and can be used as a platform. The device  
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1 when used as a platform is raised off the ground approximately  
2 six to eight inches. The step is raised and lowered by two  
3 sets of hinges, which are connected to the step and to one side  
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5 of the rectangular box.  
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1                   **BRIEF DESCRIPTION OF THE DRAWINGS**

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3   Figure 1 is a perspective view of the device with the added step  
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5   in the raised position.

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7   Figure 2 is a perspective view of the device with the added step  
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9   flush with the top of the device.

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11  Figure 3 is a cross sectional view of the device showing the  
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13   step in the raised position.

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15  Figure 4 is a cross sectional view of the mechanism to support  
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17   the step.

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19  Figure 5 is a view showing the articulation of the hinge.  
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1            DETAILED DESCRIPTION OF THE EMBODIMENT

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3       This particular device 50 is in the shape of a rectangular  
4       box or frame. The device is comprised of a flat planar surface  
5       100 with a step 200 which can be raised and lowered  
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7       approximately six to eight inches. Figure 1 shows the  
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9       perspective view of the device with the step 200 in the "up" or  
10      raised position. On one end of the rectangular box is the flat  
11      surface 100, which is permanently affixed to approximately one  
12      third of a portion of the top of the rectangular box. The flat  
13      surface 100 allows the person to step on the device 50 and then  
14      step on the additional step 200, which is provided.

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23       In the center of the device is the recessed step 200, which  
24      rotates around a nut and bolt assembly, 400, 410, on both sides  
25      of the bottom surface of the recessed step 200. Figure 4 The  
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27      nut and bolt assembly 400, 410 are attached to the device with  
28      hinges 300 on both sides of the step. Figure 3 The device will  
29      give the person an additional six to eight inches when the step  
30      200 is in the "up" position.

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37       In the "down" position the recessed step 200 lies flush and  
38      parallel with the flat planar surface 100. Figure 2 This allows  
39      easy storage of the device 50.

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43       A hole 250 in the middle of the recessed step 200, which is  
44      raised or lowered, allows the user to carry the device from  
45      place to place and stow it wherever desired. When the step 200  
46      is "down" the device 50 can be slid under a couch or stowed  
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1 between appliances. This keeps the device 50 out of the way of  
2 the homeowner. Figure 2 shows the step in the "down" position.  
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4       Figure 2 is a perspective view showing the position of the  
5 step 200 and the other flat planar member 100 lying flush with  
6 the step 200. The recessed step 200 will rotate in an "up" or  
7 "down" direction and is supported by a hinge 300 and a stop  
8 mechanism 310 on both sides of the step. Figure 3 The hinge 300  
9 and stop mechanism 310 allows the additional step 200 to be  
10 raised and lowered to the desired height. Hinges 300 are  
11 located on both sides of the recessed steps to secure the step  
12 to the device.

13       The hinge 300 as depicted in Figure 3 is supported by a  
14 bolt and nut assembly 400, 410, which is connected to the step  
15 200 and the wooden frame of the device 50. Figure 4 The hinges  
16 300 are located at the approximate midpoint of the recessed step  
17 200 and the side member of the rectangular box. While a nut and  
18 bolt assembly 400, 410 is depicted in Figure 3, other means of  
19 attachment may be used to achieve the same purpose. The nut and  
20 bolt assembly 400, 410 as depicted in Figure 5 is recessed  
21 slightly to allow freedom of movement of the step 200 from the  
22 up to down position and vice versa.

23       The stop mechanisms 310 are positioned so that the step 200  
24 rotates to a position slightly greater than ninety degrees from  
25 the vertical plane. This angle will insure that the step 200  
26 stays in place as it rotates upward to approximately one hundred  
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1 and ten degrees from the vertical plane of the device. The  
2 degree of rotation of the step 200 in relation to the horizontal  
3 plane allows the step to be raised and stay in an upright  
4 position without the necessity of a separate hinge or other  
5 locking device.

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11 The step 200 is prevented from rotating more than  
12 approximately one hundred and ten degree by the stop mechanism  
13 310, which has been placed adjacent to the hinge 300. Figure 3  
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15 The stop mechanism 310 is positioned on the inner surface of the  
16 device and will prevent the step from rotating any more than  
17 approximately one hundred and ten degrees. Both inner surfaces  
18 of the device are equipped with the stop mechanism 310 at the  
19 location of the step 200.  
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22 The choice of material will be selected so that the device  
23 will be able to support an adult and be durable for that  
24 purpose.  
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